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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/533,160 | 10/12/2005 | Werner Gehringer | 37998-237519 | 7155 |

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| EXAMINER | |
|---|---|
| NOAKES, SUZANNE MARIE | |
| **ART UNIT** | **PAPER NUMBER** |
| 1656 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/533,160 | GEHRINGER ET AL. | |
| | Examiner | Art Unit | |
| | Suzanne M. Noakes, Ph.D. | 1656 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *31 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2 and 5-11* is/are pending in the application.

4a) Of the above claim(s) *6 and 7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/30/07 & 7/5/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of Group I, claims 1, 2, 5 and 9-11 in the reply filed on 31 May 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). The requirement is deemed proper and is Final.

### *Status of the Application*

2. Claims 1, 2 and 5-11 are pending. Claims 6-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected subject matter, there being no allowable generic or linking claim. Claims 1, 2, 5 and 9-11 are subject to examination on the merits.

### *Information Disclosure Statement*

3. The information disclosure statements (IDS) submitted on 05 July 2005 and 30 March 2007 have been considered by the examiner. See initialed and signed PTO-1449's.

### *Specification*

4. Applicants are provided the following to remind them of the preferred layout of the specification.

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

### *Claim Rejections - 35 USC § 112 – 2nd paragraph*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 2, 5 and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "having a reduced prekallikrein activator content" recited in claim the preamble of claim 1 is a relative term which renders the claim indefinite. The term "reduced" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term is deemed relative because it is unclear what the reduction of PKA is supposed to be compared to. For instance, is having "a reduced PKA content" relative/compared to the starting material, wherein step c) of claim 1 is well known in the art to be responsible for this reduction in PKA content. Or is relative to various parts of the claim? For example, as stated, it is well known that pasteurization is responsible for the reduction in PKA content (see Marley et al. cited on the IDS), however, it is not apparent if incubating the vials at the end has a further reduction on the PKA content compared to part c) and/or a).

### *Claim Rejections - 35 USC § 112 – 1st paragraph*

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1, 2, 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for of manufacturing an albumin enriched fraction having a reduced prekallikrein activator content (PKA) by the methods of a-e as recited in claim 1, wherein the pasteurization is performed for a specified time

period, does not reasonably provide enablement for said method wherein the pasteurization occurs for any length of time. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The factors to be considered in determining whether undue experimentation is required are summarized In re Wands 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988). The court in Wands states: "Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. The key word is 'undue,' not 'experimentation.' " (Wands, 8 USPQ2d 1404). Clearly, enablement of a claimed invention cannot be predicated on the basis of quantity of experimentation required to make or use the invention. "Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations." (Wands, 8 USPQ2d 1404). The factors to be considered in determining whether undue experimentation is required include: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

The claims are drawn to a method of producing albumin enriched fractions having a reduced PKA content by performing a series of steps which involve pasteurization for any length of time at 50-70°C(claims 1 and 2) or for a time period of at

least five hours or at least 10 hours (claims 10 and 11). It is noted that the method of albumin pasteurization is a well known method in the art. It is performed for several reasons such as the killing of hepatitis viruses that may be present in the blood plasma fractions (see, for example, Fernandes et al. (US 4440679, column 3, lines 18-52; or Matejtschuk et al., p. 887, column 2, last paragraph and Marley et al., p. 320, Abstract and Introduction – all cited on IDS's). The pasteurization is done at a temperature of 60 C° for a period of 10-11 hours, which also is what the FDA requires for albumin which is to be utilized for use in human transfusions in order to kill said viruses (see Peters et al., cited on IDS of 3/30/07). However, it is apparent that there is significant variation of the time span that is encompassed within the claims and range of temperatures encompassed therein as well. Pasteurization for a time period of weeks at the upper range of said temperatures would likely inactivate even the albumin, however, pasteurization at the lower temperature range for that time period likely would activate proteases which would destroy the albumin. Analogously, pasteurization for seconds or minutes would do absolutely nothing in terms of pasteurizing anything and it would not decrease the PKA content in the slightest. Furthermore, significant variations in the PKA content and thus concentration is noted to occur at even the smallest change in temperature. Marley et al. (cited on IDS from 3/20/07) state that PKA is inactivated to a greater extent at 60.5 C° compared to 59.5 C° (both incubated/pasteurized for the same time of 10 hours) which leads to a two- to three-fold difference in PKA concentration in the final product. It is noted that at 56C° that PKA only goes through a partial inactivation when incubated/pasteurized for two hours (see p. 323, 1st column, 1st

paragraph). Complete inactivation of PKA is noted to occur in a time as little as two hours at 65 C° (see p. 324, 1st column, last paragraph). Thus, a determined time at a relevant temperature is apparently needed in order for inactivation, and thus, a decrease in concentration of PKA to occur. The specification only contemplates temperatures of 58-65 C° for at least five hours, however, all of the Examples are drawn to at least nine hours. As noted the prior art establishes that even a one degree shift in temperature, e.g. 59.5 to 60.5 can have significant effects on the PKA concentration of albumin enriched fractions and there is not much information available for temperatures below 59.5 °C because of the Food and Drug Administration's strict mandate and rules for the pasteurization of albumin. Thus, one skilled in the art would be required to determine the relevant time, and temperatures corresponding to said time, that would result in a decrease of the PKA content, especially in the lower temperature range of the 50-70 °C range. The prior art seems to indicate unpredictability of PKA inactivation and thus a decrease in concentration when lower pasteurization temperatures are used. However, as noted, this has not been studied and thus a skilled artisan would be required to determine this given the scope of the claims and this is seen as undue experimentation.

***Conclusion***

9. No claim is allowed.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzanne M. Noakes, Ph.D. whose telephone number is

571-272-2924. The examiner can normally be reached on Monday to Friday, 7.00am to 3.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr Bragdon can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SMN
22 July 2007

Suzanne M. Noakes
Patent Examiner AU 1656